REMARKS

Reconsideration of the subject application is respectfully requested.

Claims 1-26 were rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application No. 919,392 ("Aruga") in view of U.S. Patent No. 5,930,553 ("Hirst"). This rejection is respectfully traversed.

With regard to Claim 1, as now amended, it recites, in part, a storage processor for storing a cumulative amount relating to the specific function of the one replaceable unit metered by the counting processor in a first specific area of the memory, and when the detection processor detects that the one replaceable unit is replaced with a new replaceable unit, storing a separate cumulative amount relating to the metered specific function of the new replaceable unit in a second specific area of memory, and storing in a third specific area of memory a total amount relating to the specific function.

Similarly with regard to independent method Claim 23, as now amended, it recites, in part, a storage step of storing in a plurality of specific areas in memory, separately for each of one of a plurality of removed, installed, or replaced replaceable units, a cumulative amount relating to a specific function of each one of the plurality of removed, installed, or replaced replaceable units in correlation with the date information.

As described in the specification, for example, on page 11, lines 14-30, "in the example shown in Fig. 3 five usage counter areas 113a to 113e are reserved, and values are stored in three areas 113a, 113b, and 113c. From this it can be determined that the cutter blade 107 currently being used is the third blade used since the printer 101 started being used. By reading the values stored in usage counter area 113 of flash EEPROM 111, it is further known that the first cutter blade that was used was replaced after 12,324 x 100 cuts; the second cutter blade was replaced after 15,324 x 100 cuts; and the current (third) cutter blade has so far made 423 x 100 cuts. The address of the current usage counter area 113c is stored in current address buffer 114. Each time a new usage counter area 113 is reserved in step S202, the address stored in current address buffer 114 is updated (incremented) by a specific value. A total usage counter area 115 can

also be used. A value 28701 indicating the total number of cutter blade operations to present is stored in total usage counter area 115."

The present invention overcomes the disadvantages of conventional printers that store only information relating to the cumulative operation of a part since the start of use by the printer, or information relating to the operation or use of a specific currently used part. The present invention stores information relating to two or more parts and the total amount relating to the specific function. As the Examiner points out with regard to Aruga, the A-counter value must be reset when a new part is used. So the information relating to the previous part (the replaced part) is lost. Neither Aruga nor Hirst recognizes the advantage of the present invention in which information about how much a replaced part has been operated before being replaced is stored in order to gather statistics on the operating durability of those parts. Dependent Claims 2-12, and 24 recite yet additional novel features and are patentable for at least the same reasons as discussed above with regard to independent Claims 1 and 23.
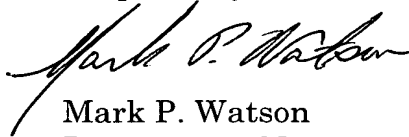
Independent Claim 13 has been amended to include the subject matter of dependent Claim 14, which has been cancelled. The Examiner's rejection of original Claim 14 is respectfully traversed. With regard to the limitation "usage limit memory for storing a usage limit value indicative of at least one of a maximum usable volume or count associated with the specific function of the one replaceable unit," the Examiner refers to col. 10, lines 19-22 of Aruga. But this paragraph merely states that the counters can be decremented from their maximum value rather than be counted-up. This relates only to the maximum value of the counters. It has nothing to do with <u>a maximum usable volume or count associated with the specific function</u>. The Examiner further states that "every time the counter decrements the value, it is sent to the host." Where is this shown in Aruga? The count values are read using a control command (see paragraph [0034] of Aruga, for example). Further, neither Aruga nor Hirst disclose or suggest a storage processor that stores the time information in correlation with an output signal indicative that at least one of the usage amount or count associated with the specific function of the one replaceable unit is at

least one of near or at the stored usage limit value. This is not the installation date nor is it the average consumable life value referred to in Hirst.

The rejection of Claims 16-22, 25, and 26 is respectfully traversed. However, in order to expedite prosecution of the subject application, these claims have been cancelled.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration of the present application.

Respectfully submitted,

Mark P. Watson
Registration No. 31,448

Please address all correspondence to:

Epson Research and Development, Inc.
Intellectual Property Department
150 River Oaks Parkway, Suite 225
San Jose, CA 95134
Phone: (408) 952-6000
Facsimile: (408) 954-9058
Customer No. 20178

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